



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/602,476

06/24/2003

Nagesh R. Basavanhally

Basavanhally 31-3

2680

46850

7590

12/04/2008

MENDELSON & ASSOCIATES, P.C.

1500 JOHN F. KENNEDY BLVD., SUITE 405

PHILADELPHIA, PA 19102

EXAMINER

CHIEM, DINH D

ART UNIT

PAPER NUMBER

2883

MAIL DATE

DELIVERY MODE

12/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/602,476	Applicant(s) BASAVANHALLY ET AL.	
	Examiner ERIN D. CHIEM	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13, 15-18, 20-25, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 12, 14, 19, 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 13, 15-18, 20-25, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burwell et al. (US 7,252,677 B1) in view of Pathak et al. (US 6,176,871 B1).

Regarding claims 1 and 17 Burwell disclosed a sensing system adapted to measure one or more physical parameters, the system comprising: a first sensor (84) optically coupled to said fiber (Fig. 1), wherein, when interrogated with light coupled into the fiber, the first sensor generates an optical response corresponding to a first value of a first physical parameter to provide a measure of the first value; and a first optical filter (16 and 17) inserted into the fiber, wherein the first filter is adapted to direct light corresponding to the first sensor between the fiber and the first sensor.

However, Burwell does not teach the first sensor is mounted onto a side of an optical fiber.

Pathak teaches an intraluminal device wherein the sensing system having a first sensor (10 and 19) mounted onto a side of an optical fiber (11). It would have been obvious to one having ordinary skill in the art at the time of invention to modify the disclosure of Burwell with Pathak's teaching since they both are from the same field of endeavor. The motivation would have been to obtain pressure values as disclosed in Pathak (col. 19, lines 8-26).

Regarding claim 3 and 18, Burwell discloses the fiber filter (16 and 17), it is well known in the art to align the optical filter as described in claim 3 and 18 in order to act as a quarter-wave plate.

Regarding claim 4, Burwell further teaches a plurality of sensing elements (84).

Regarding claim 5, the second sensor is mounted at a terminus of the fiber (claim 12).

Regarding claim 6, a second optical filter inserted into the fiber (16), wherein: the second sensor is mounted onto the side of the fiber at a location downstream from the location of the first sensor; and the second filter is adapted to direct light corresponding to the second sensor between the fiber and the second sensor (34).

Regarding claim 7, when interrogated with the light coupled to the fiber, the sensor generates an optical response corresponding to a second value of the first physical parameter to provide a measure of the second value (col. 8, lines 25-50).

The examiner considers the limitation to claim 8 to be functional and is not given patentable weight.

Regarding claim 9, The light corresponding to the first sensor is substantially monochromatic light (Fig. 8, 9A, and 9B).

Regarding claim 10, an interrogation device optically coupled to the fiber and adapted to (i) generate the interrogating light and (ii) detect the optical response (Fig. 1 '3').

Regarding claim 11, a catheter having an external tube and an internal tube enclosed by the external tube wherein the internal tube accommodates the fiber (Fig. 1); the first sensor is exposed on an exterior of the external tube (84); the first physical parameter is pressure; and the

Art Unit: 2883

catheter is adapted to be inserted into a blood vessel to enable the first sensor to sense blood pressure in said blood vessel (See Figs 1 and 2A).

Regarding claim 13, the first sensor is one of a plurality of sensors, in which each sensor is optically coupled to the fiber (84).

The examiner considers the limitation of claim 15 and 16 to be functional, specifically a method of using the device, and is not given patentable weight because claim 15 is a device claim.

Regarding claim 20, Burwell teaches a method of coupling an optical device to an optical fiber, comprising: inserting an optical filter into the fiber (Fig. 1); wherein the device is optically coupled to the fiber; and comprising is configured to direct light corresponding to the device between the fiber and the device.

However, Burwell does not teach the device is optically mounted onto a side of the fiber.

Pathak teaches a method of coupling an optical device to an optical fiber wherein the step of mounting the optical device onto a side of the fiber is shown in Fig. 1. It would have been obvious to one having ordinary skill in the art at the time of invention to recognize the disclosure of Pathak would be modifiable to the prior art of Burwell. The motivation is to provide the fiber a means to interrogate the and determine the pressure applied onto the optical device as taught by Pathak (col. 19, line 8-26).

Regarding claim 21, the side is parallel to the longitudinal axis of the fiber (Fig. 1).

Regarding claim 22, the side is parallel to the longitudinal axis of the fiber (Fig. 1).

Regarding claim 23, the side is parallel to the longitudinal axis of the fiber (Fig. 1).

Claim 24 and 27, Burwell discloses a sensing system adapted to measure one or more values corresponding to one or more physical parameters, the system comprising: a first sensor mounted onto a side of an optical fiber and optically coupled to said fiber (84), wherein, when interrogated with light coupled into the fiber, the first sensor generates an optical response corresponding to a first value of a first physical parameter to provide a measure of the first value; and a catheter having an external tube and an internal tube enclosed by the external tube, wherein: the internal tube accommodates the fiber (24, 25); the first physical parameter is pressure; and the catheter is adapted to be inserted into a blood vessel to enable the first sensor to sense blood pressure in said blood vessel (27, 28).

However, Burwell does not disclose the first sensor is exposed on an exterior of the external tube.

Pathak teaches the first sensor is mounted on the side of the fiber wherein it would have been exposed to an exterior of the external tube (Fig. 1; '19, '10'). The motivation is to provide the fiber a means to interrogate the and determine the pressure applied onto the optical device as taught by Pathak (col. 19, line 8-26).

Examiner would like to note that the functional limitation of claim 27 is not given patentable weight since this is a device claim

Regarding claim 25 and 28, Burwell discloses a sensing system adapted to measure one or more values corresponding to one or more physical parameters, the system comprising: a first sensor (14) optically coupled to said fiber, wherein, when interrogated with light coupled into the fiber, the first sensor generates an optical response corresponding to a first value of a first

Art Unit: 2883

physical parameter to provide a measure of the first value, wherein the first sensor is one of a plurality of sensors, in which each sensor is optically coupled to the fiber.

However, Burwell does not disclose the first sensor is mounted onto a side of the fiber.

Pathak teaches an intraluminal device wherein the sensing system having a first sensor (10 and 19) mounted onto a side of an optical fiber (11). It would have been obvious to one having ordinary skill in the art at the time of invention to modify the disclosure of Burwell with Pathak's teaching since they both are from the same field of endeavor. The motivation would have been to obtain pressure values as disclosed in Pathak (col. 19, lines 8-26).

Examiner would like to note that the functional limitation of claim 28 is not given patentable weight since this is a device claim

Allowable Subject Matter

Claims 12, 14, 19, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIN D. CHIEM whose telephone number is (571)272-3102. The examiner can normally be reached on Monday - Thursday 9AM - 5PM.

Art Unit: 2883

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Erin D Chiem/
Examiner, Art Unit 2883

/Frank G Font/
Supervisory Patent Examiner, Art Unit 2883